

R2110

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High Speed Smart LTE/LTE-A Router

4 x Ethernet + 1 x RS-232 + 1 x RS-485 + Wi-Fi



INTRODUCTION

The Robustel High Speed Smart LTE/LTE-A Router R2110 is a rugged cellular router delivering state-of-the-art mobile connectivity for internet of things (IoT) applications.

The R2110 is built on RobustOS, Robustel's proprietary Linux-based operating system specifically designed for Robustel devices. RobustOS includes essential networking features and protocols, ensuring an excellent user experience. Additionally, RobustOS provides a Software Development Kit (SDK) that enables partners and customers to develop IoT applications using C and C++. It also offers a variety of applications to address the diverse demands of the fragmented IoT market.

The **Robustel Cloud Manager Service (RCMS)** is a unified cloud-based platform designed for real-time monitoring and centralized management of industrial IoT devices. Fully compatible with Robustel routers and gateways, RCMS delivers an interactive geospatial dashboard that enables users to visualize device locations and track critical metrics such as data usage, signal strength, and network status. To ensure seamless operations, the platform facilitates over-the-air (OTA) updates for firmware, configurations, and applications, minimizing downtime while optimizing system performance. For more information or to get started with RCMS, visit: <https://rcms-cloud.robustel.net>

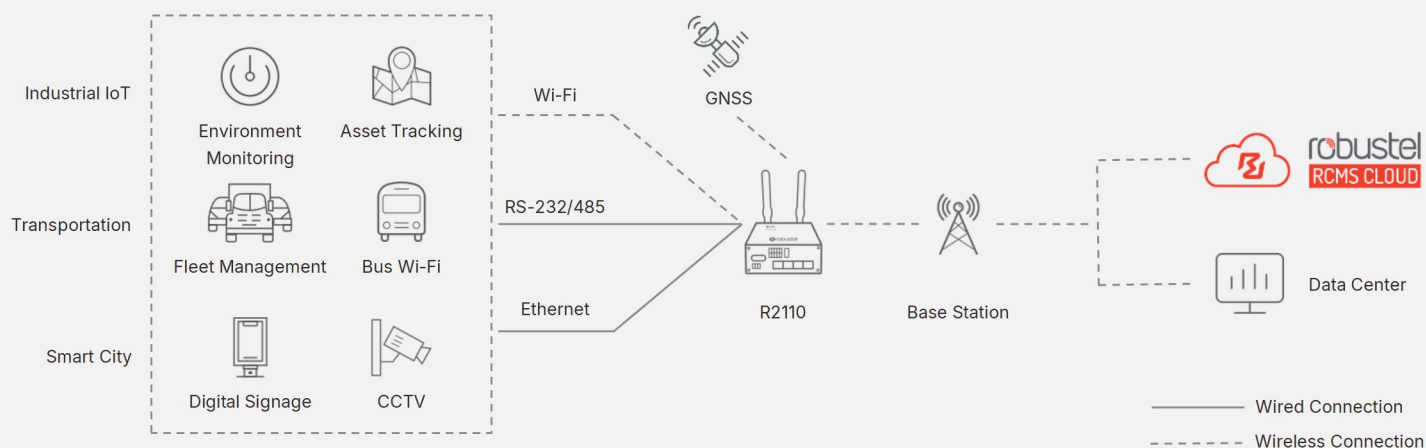


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RCMS CLOUD

KEY FEATURES

- Supports WWAN, WAN, and WLAN link backup, as well as ICMP detection
- Dual-band Wi-Fi with AP and client modes
- Supports cold backup, warm backup and load balancing capabilities
- Powered by RobustOS, featuring an SDK and a variety of applications
- Supports IPsec, OpenVPN, GRE, and WireGuard
- Management and maintenance via Web, CLI, SNMP, and RCMS
- Robust industrial design with options for desktop, wall, or DIN rail mounting

APPLICATION EXAMPLE



SPECIFICATIONS

Hardware

Hardware System

CPU	Dual-core MIPS, 880 MHz
RAM	512 MB
Flash	32 MB

Cellular Interface

Number of antennas	2 (MAIN + AUX)
Connector	SMA-K
SIM	2 x Mini SIM (2FF)

Ethernet Port

Number of ports	4 x 10/100/1000 Mbps, 4 x LAN by default, can be configured as 1 x WAN + 3 x LAN supporting 802.3at PD feature on ETH0 (optional)
Magnet isolation protection	1.5 kV

Serial Port

Number of ports	1 x RS-232 + 1 x RS-485
Connector	2 x 3-pin on 2 x 5-pin 3.5 mm female socket
Baud rate	300–115200 bps

Digital Input / Digital Output

Number of ports	1 x DI + 1 x DO, wet contact
Connector	2 x 2-pin on 2 x 5-pin 3.5 mm female socket
Absolute max voltage	+30 VDC (DI), +30 VDC (DO)
Absolute max current	100 mA (DO)

Wi-Fi Interface

Number of antennas	2
Connector	RP-SMA-K
Standards	802.11 a/b/g/n/ac; 2 x 2 MIMO; supports AP and client modes
Frequency bands	2.400–2.4835 GHz (2.4 GHz ISM band) 5.150–5.850 GHz (5 GHz ISM band)
Security	WPA, WPA2, WPA3
Encryption	AES, TKIP, WEP64

GNSS Interface (optional)

Number of antennas	1
Connector	SMA-K with 50 ohms impedance
Technology	GPS/QZSS/GLONASS/Galileo/BeiDou
Tracking sensitivity	GNSS: greater than -148 dBm
Horizontal position accuracy	GNSS: 2.5 m

Others

Reset button	1 x RST
USB port	1 x USB 2.0 (host), Type A, 5 V, 500 mA
LED indicators	1 x RUN, 1 x MODEM, 1 x NET, 1 x USR, 1 x RSSI, and 1 x WIFI
microSD	1 x microSD slot (onboard)
Watchdog	Built-in

Power Supply and Consumption

Connector	3-pin 3.5 mm terminal block with lock
Input voltage	12/24 VDC, 9–36 VDC 42.5–57.0 VDC (PoE-PD) Reverse polarity protection, surge protection
Power consumption	Idle: 6 W@12 V Max: 16 W@12 V
Rec. power supply	12 VDC/1.5 A power adapter

Physical Characteristics

Ingress protection	IP30
Housing & Weight	Aluminum, 500 g
Dimensions	48 x 100 x 125 mm
Installation	Desktop, wall mounting & 35 mm DIN rail mounting
Operating temperature	-20 to +55 °C (normal operation) -25 to +70 °C (extended operation)
Storage temperature	-40 to +85 °C
Relative humidity	5–95% RH (non-condensing)

Regulatory and Type Approvals

Environmental	RoHS 2.0, WEEE
EMI	EN 55032 Conducted Emission Class A EN 55032 Radiated Emission Class B
EMS	EN 61000-4-2 (ESD) Contact Level 2, Air Level 3 EN 61000-4-3 (RS) Level 2 EN 61000-4-4 (EFT) Level 2 EN 61000-4-5 (Surge) Level 3, AC Mains Power Port Level 2, Signal Ports EN 61000-4-6 (CS) Level 2 EN 61000-4-8 (PFM) Level 2 EN 61000-4-11 (Dips) Class 2

Software

Operating System (Basic Features of RobustOS)

Network protocols	PPP, PPPoE, ARP, VLAN, ICMP, NAT, TCP, UDP, DHCP, DNS, DDNS, NTP, HTTP, HTTPS, Telnet, SSH2, SMTP, etc.
VPN tunnels	IPsec, OpenVPN, GRE, WireGuard
Firewalls	DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control
Remote management	Web, CLI, SMS, RCMS
Serial port protocols	Transparent, TCP Client/Server, UDP, Modbus RTU Gateway
Others	Smart Roaming V3, etc.

SDK

Operating system	RobustOS (based on Debian Linux)
Programming languages	C, C++
Available Flash for SDK	5 MB
Available RAM for SDK	256 MB

App Center (Available Apps for RobustOS)

Apps*	L2TP, PPTP, DMVPN, VRRP, QoS, SNMP, Language, RCMS, Dynamic Routing, Captive Portal, Modbus Master, TR069*, Edge2Cloud
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*Available upon request. For more apps, please visit www.robustel.com.

Cloud Platform

Robustel Cloud Manager Service (RCMS)	RobustLink, RobustVPN, Operation Console
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ORDERING INFORMATION

Model	Order Code	GNSS	PoE-PD	Frequency Bands	Region	Certifications	Package Contents
R2110-4L	A004400704	-	✓	LTE CAT4 4G: LTE FDD: B1/3/7/8/20/28A 3G: WCDMA: B1/8 2G: GSM: B3/8	EMEA and SEA	CE, UKCA, E-Mark	1 x Router (B Code: B044722)
	A004400705	-	-	LTE CAT4 4G: LTE FDD: B1/2/3/4/5/7/8/12/13/18/19/ 20/25/26/28 LTE TDD: B38/39/40/41 3G: WCDMA: B1/2/4/5/6/8/19 2G: GSM: B2/3/5/8	Global	CE, UKCA, E-Mark	1 x Router (B Code: B044751)
	A004400706	-	✓		Global	CE, UKCA, E-Mark	1 x Router (B Code: B044730)
	A004400708	✓	✓		Global	CE, UKCA, E-Mark, ICASA	1 x Router (B Code: B044744)

NOTE:
1. For more information about regional and carrier-specific variants, please contact us.
2. * Denotes certification in progress.